Postdoctoral Fellow – Molecular Diagnostics, Synthetic Biology & Protein Biomanufacturing

Supervisor: Prof. Keith Pardee
Salary: $65,000+ per year, commensurate with experience
Job type: Full-time, Contract
Number of hires for this role: 2

About us:

The Leslie Dan Faculty of Pharmacy at the University of Toronto is Canada's top faculty of pharmacy and ranked among the top in the world. We bring together Canada's leading scientists, researchers, and educators in the heart of Toronto's innovation and health research ecosystem. We advance professional pharmacy practice and pharmaceutical science through world-leading education and research and are recognized worldwide for our outstanding scholarship, ingenuity, creativity, and impact.

Our faculty, students, staff, and alumni come together to create a vibrant, collaborative environment rich with possibilities. We are at the forefront of redefining pharmacy's impact in health care and developing the capacity of pharmaceutical science to pinpoint better therapeutic targets, create new ways of building medications, and ensure medication use is safe and effective. We are committed to achieving inclusive excellence and fostering an environment where each member of our community can achieve their full potential.

Your opportunity:

The Pardee Lab at the University of Toronto (www.pardeelab.org) is seeking two postdoctoral fellows with expertise in molecular biology, synthetic biology, DNA nanotechnology, protein biochemistry, and/or biomanufacturing.

We are a multidisciplinary team of scientists and engineers who are passionate about developing technologies that will improve access to health care. Candidates will have the opportunity to work at the interface of molecular biology, synthetic biology, diagnostics, protein engineering, and device development.

One position is focused on applied molecular biology, including the design and development of detection techniques. Experience in areas such as molecular engineering, synthetic biology, DNA nanotechnology, nucleic acid modifications and base editing, fluidics and hardware integration, DNA construct design, bio-conjugation, and diagnostics assay development will be considered an asset.

The second position will focus primarily on protein production, protein biochemistry, and biomanufacturing. Work will focus on protein binder (miniprotein/peptide) discovery and characterization, as well as the development of de-centralized biomanufacturing using cell-free protein expression. Experience with recombinant protein production, protein purification and characterization (BLI, SPR),

protein engineering, directed evolution, enzyme assays, basic device fabrication and optimization of biomanufacturing workflows will be considered strong assets. Experience with developing scalable or cell-free approaches for protein production is also highly desirable.

Both positions will involve close collaboration with researchers with complementary expertise and may involve working at the interface of molecular biology, protein engineering, fluidics, and device development.

The role involves generating publications, contributing to grants and progress reports, mentorship of junior lab personnel, some lab management, and the maintenance of meticulous records. Appointment will be made for one year with the option of renewal.

Qualifications:

The successful candidate will have a Ph.D. in a relevant scientific field (e.g., biomedical engineering, molecular biology, biochemistry, biotechnology, bioengineering, or a related discipline).

A highly qualified candidate will also have strong writing skills, with an excellent publication record, including impactful work from field-relevant journals, and be able to prepare manuscripts for submission to peer-reviewed journals. The candidate will be able to work independently while also working well as part of a collaborative team on group projects.

Expected start date: October 2026

Term: 1-year initial term, with the option to be extended to two or more years, contingent on continued availability of funding.

We offer a competitive salary based on qualifications and experience. In addition, we offer an attractive benefits package that includes extended health and dental coverage and paid vacation.

Application instructions

Individuals interested in this position can submit a CV and a cover letter by e-mail to: pardeelab@utoronto.ca . The cover letter should detail how the candidate's background, qualifications, and research skills meet those required for this position. Applicants should indicate whether they are primarily interested in the molecular diagnostics/synthetic biology position, the protein production/biomanufacturing position, or both.

Please include "PDF Molecular Diagnostics" or "PDF Protein Biomanufacturing" in the subject line, as appropriate.

Diversity Statement

University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas. As part of your application, you will be asked to complete a brief Diversity Survey. This survey is voluntary. Any information directly related to you is confidential and cannot be accessed by search committees or human resources staff. Results will be aggregated for institutional planning purposes.

Job Type: Full-time, Contract

Salary: $65,000–$75,000 per year, commensurate with experience

Schedule:

- 8-hour shift
- Day shift
- Monday to Friday

The position requires some flexibility in hours, as some experiments may require staying longer on certain days.

Work requires the candidate to be **on site** and not work remotely.

Posting Date: 09/11/2026

Closing Date: 09/28/2026, 11:59PM ET

Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the CUPE 3902 Unit 5 Collective Agreement.

The normal hours of work are 40 hours per week for a full-time postdoctoral fellow (pro-rated for those holding a partial appointment) recognizing that the needs of the employee's research and professional development training and the needs of the supervisor's research program may require flexibility in the performance of the employee's duties and hours of work.